

CLAIMS

What is claimed is:

1. A locking mechanism for an enclosure, the enclosure having a door and a housing, the locking mechanism comprising:
 - a drive mechanism for moving the locking mechanism between locked and unlocked positions;
 - a first plate engaged with the drive mechanism for selectively engaging the door with the housing;
 - a second plate engaged with the drive mechanism; and
 - a tumbler stack associated with the second plate for selectively allowing the second plate to move to the unlocked position, wherein the first and second plates are slidingly coupled to one another, wherein the movement of one of the plates causes movement of the other plate irrespective of the connection of the first and second plates to the drive mechanism.
2. The locking mechanism as recited in claim 1, wherein one of the first and second plates has a slot defined therein, and the other plate has a guide piece mounted thereon that is slidingly received in the slot.
3. The locking mechanism as recited in claim 2, wherein the guide piece is a pin.
4. The locking mechanism as recited in claim 2, further comprising a rod mounted to the door, wherein an aperture is formed in one of the first and second plates to slidably receive the rod, and wherein the slot is positioned at an angle relative to the aperture.

5. The locking mechanism as recited in claim 4, wherein the slot is positioned at an angle of about 45 degrees relative to the aperture.
6. The locking mechanism as recited in claim 2, wherein the slot is defined in the first plate and the guide piece is mounted to the second plate.
7. The locking mechanism as recited in claim 1, wherein a handle is coupled with the drive mechanism.
8. The locking mechanism as recited in claim 1, wherein the drive mechanism includes first and second gears, wherein the first gear is coupled with the first plate and the second gear is coupled with the second plate.
9. The locking mechanism as recited in claim 8, wherein the drive mechanism includes a third gear that is coupled with a third plate, wherein the second and third locking plates are each coupled with at least one locking pin for selectively engaging the door with the housing.
10. The locking mechanism as recited in claim 1, wherein the first plate is coupled with at least one locking pin for selectively engaging the door with the housing.
11. The locking mechanism as recited in claim 1, further comprising a tail piece coupled with the second plate and being associated with the tumbler stack to selectively allow the second plate to move to the unlocked position.

12. The locking mechanism as recited in claim 11, wherein the tail piece includes an extension plate and an engagement flange.

13. The locking mechanism as recited in claim 1, wherein the tumbler stack is coupled with a combination lock.

14. The locking mechanism as recited in claim 1, wherein the tumbler stack is coupled with a keyed lock.

15. A locking mechanism for an enclosure, the enclosure having a door and a housing, the locking mechanism comprising:

- a drive mechanism for moving the locking mechanism between locked and unlocked positions;

- a live bolt lock plate engaged with the drive mechanism and having a slot defined therein;

- a primary lock plate engaged with the drive mechanism and having a guide pin mounted thereon, wherein said guide pin is slidingly positioned within the slot; and

- a tumbler stack associated with the primary lock plate for selectively allowing the primary locking plate to be moved to the unlocked position.

16. The locking mechanism as recited in claim 15, further comprising a rod mounted to the door, wherein an aperture is formed in one of the live bolt lock plate and the

primary lock plate, wherein the aperture is sized to slidably receive the rod, and wherein the slot is positioned at an angle relative to the aperture.

17. The locking mechanism as recited in claim 16, wherein the slot is positioned at an angle of about 45 degrees relative to the aperture.

18. The locking mechanism as recited in claim 15, wherein the drive mechanism includes first and second gears, wherein the first gear is coupled with the live bolt lock plate and the second gear is coupled with the primary lock plate.

19. The locking mechanism as recited in claim 18, wherein the drive mechanism includes a third gear that is coupled with a secondary lock plate, wherein the primary and secondary lock plate are each coupled with at least one locking pin for selectively engaging the door with the housing.

20. The locking mechanism as recited in claim 15, wherein the live bolt lock plate is coupled with at least one locking pin for selectively engaging the door with the housing.

21. The locking mechanism as recited in claim 15, further comprising a tail piece coupled with the primary lock plate and associated with the tumbler stack to selectively allow the primary lock plate to move to the unlocked position.

22. The locking mechanism as recited in claim 21, wherein the tail piece includes an extension plate and an engagement flange.

23. The locking mechanism as recited in claim 15, wherein the tumbler stack is coupled with a combination lock.

24. The locking mechanism as recited in claim 15, wherein the tumbler stack is coupled with a keyed lock.

25. A locking mechanism for a safe, the safe having a door and a housing, the locking mechanism comprising:

a drive mechanism for moving the locking mechanism between locked and unlocked positions, the drive mechanism having first and second gears;

a live bolt lock plate engaged with the first gear of the drive mechanism and having at least one locking pin mounted thereto for selectively engaging the door and the housing, the live bolt lock plate having a slot defined therein;

a primary lock plate engaged with the second gear of the drive mechanism, the primary lock plate having a guide pin mounted thereon, wherein said guide pin is slidingly positioned within the slot;

a tail piece having an extension plate and an engagement flange, the extension plate coupled with the primary lock plate, the engagement flange coupled with the extension plate; and

a tumbler stack associated with the engagement flange for selectively allowing the primary locking plate to be moved to the unlocked position, wherein the live bolt lock plate and the primary lock plate are slidingly coupled to one another, wherein the movement of one of the plates causes movement of the other plate irrespective of the connection of the live bolt lock plate and the primary lock plate to the drive mechanism.

26. The locking mechanism as recited in claim 25, further comprising a rod mounted to the door, wherein an aperture is formed in one of the live bolt lock plate and the primary lock plate, wherein the aperture is sized to slidably receive the rod, and wherein the slot is positioned at an angle relative to the aperture.

27. The locking mechanism as recited in claim 26, wherein the slot is positioned at an angle of about 45 degrees relative to the aperture.

28. The locking mechanism as recited in claim 25, wherein the drive mechanism includes a third gear that is coupled with a secondary lock plate, wherein the primary and secondary lock plate are each coupled with at least one locking pin for selectively engaging the door with the housing.

29. The locking mechanism as recited in claim 25, wherein the tumbler stack is coupled with a combination lock.

30. The locking mechanism as recited in claim 25, wherein the tumbler stack is coupled with a keyed lock.